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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,676	02/16/2007	Stephan Mulch	41834005-031084 US BU/mo	9325
25005	7590	06/29/2009	EXAMINER	
Intellectual Property Dept. Dewitt Ross & Stevens SC 2 East Mifflin Street Suite 600 Madison, WI 53703-2865			LAUX, DAVID J	
			ART UNIT	PAPER NUMBER
			3743	
			NOTIFICATION DATE	DELIVERY MODE
			06/29/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket-ip@dewittross.com

Office Action Summary	Application No. 10/596,676	Applicant(s) MULCH ET AL.	
	Examiner David J. Laux	Art Unit 3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-10 and 12-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-10 and 12-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/21/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the tapered cross-section, the trapezoidal cross-section and the step-by-step broadening of the groove must be shown or the feature(s) canceled from the claim(s). Figs. 1-4 & 6 fail to disclose a taper in any direction and Fig. 5 appears to disclose only a channel that is tapered away from the rear wall as one moves from the bottom of the heat protection body toward the top. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term “preferably” renders the scope of the claim indefinite. Appropriate action is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

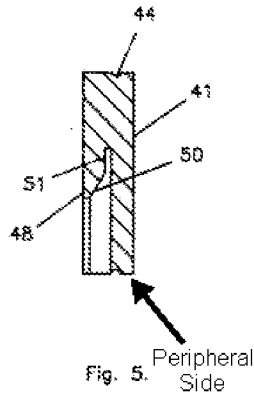
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 13-18 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,243,801 to Aiken et al.

6. '801 discloses a heat protection body (40) for a protection system for a furnace inner wall (Abstract), the heat protection body (40) having a front side (41), an opposing rear side (42), and peripheral sides (43) extending therebetween, with a groove (46) extending inwardly from the rear side (42) and one of the peripheral sides (43) (Figs. 4 & 5), wherein the cross-sectional area of the groove (46) continuously decreases as the groove extends inwardly from the one of the peripheral sides (See Fig. 5 reproduced

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below; at location point labeled 50, the cross-sectional area of the groove continuously decreases as the groove extends inwardly from the peripheral side).



7. With regard to claim 14, '801 further discloses the cross-sectional area of the groove (46) also increasing as it extends inwardly from the rear side (42) (Fig. 4; rear side is shown with contours (45)).

8. With regard to claims 15 & 17, '801 further discloses the groove defining a T-shape in the one of the peripheral sides (Figs. 4 & 6; T-shape appears at the location marked 47 by pushing the T-shape in from location 46 in Fig. 6).

9. With regard to claim 16, '801 further discloses the thickness of the heat protection body (40) between the groove (46) and the rear side (42) increases as the groove extends inwardly from the one of the peripheral sides (Fig. 5 at portion marked 50).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

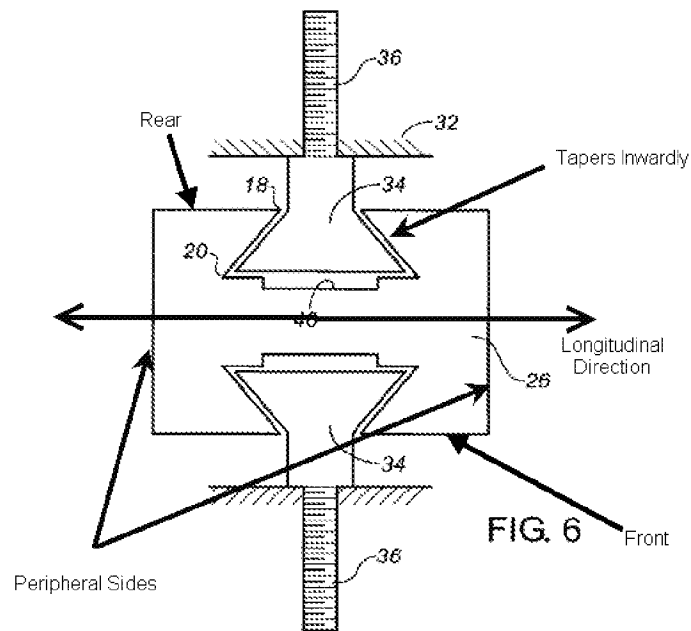
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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over '801 in view of US 6,952,905 to Nickel et al.

12. '801 discloses a heat protection body (40) for a protection system for a furnace inner wall (Abstract), having a front side (41), a rear side (42), and peripheral sides (43) connecting the front side (41) and the rear side (42) (Col. 3, lines 43-48), wherein the heat protection body (40) has in its rear side (42) at least one groove (46) to accommodate a retaining element (Col. 3, lines 56-64), wherein the groove (46) has a first face-side end (51) open to a peripheral side and a second face-side end (side opposite side 51) located in the interior of the rear side (42) (Fig. 4), wherein the groove (46) has a cross-section which broadens from the rear side (42) in the direction of the front side (41) (Fig. 5).

13. '801 fails to disclose and wherein the groove cross-section tapers in the longitudinal direction of the groove inwardly from the peripheral side. '905 teaches a groove cross-section that tapers in the longitudinal direction of the groove inwardly from the peripheral side (see Fig. 6 reproduced below). It would have been obvious for one skilled in the art at the time of invention to combine the heat protection body of '801 with the trapezoidal cross-section of the hanger and slot of '905 because such a combination would have produced the added benefit of a uniformly distributed stress load along the upper portion of the hanger and slot which would reduce the likelihood of fracture of the hanger or slot from occurring.



14. With regard to claim 2, '801 further discloses the heat protection body is designed as a plate-shape (Fig. 8).

15. With regard to claim 3, '801 as combined with '905 discloses the invention substantially as claimed except for the groove cross-section broadening step-by-step from the rear side in the direction of the front side. It would have been obvious for one skilled in the art at the time of invention to modify the heat protection body of '801 as combined with '905 to incorporate a step-by-step cross-section because the continuously sloped cross-section of '905 is merely a step-by-step cross-section with an infinite number of steps and reducing the number of steps would have the benefit of increasing the surface area of the slot, which would increase the friction between the slot and the support structure and make the heat protection body more resistant to

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movement while maintaining a more even stress distribution as compared to the one-step design of '801.

16. With regard to claim 4, '801 as combined with '905 further discloses the groove ('905: 20) having a T-shaped cross-section ('905: Fig. 6).

17. With regard to claim 5, '801 as combined with '905 further discloses the groove cross-section broadening constantly from the rear side in the direction of the front side (See '905: Fig. 6 reproduced above).

18. With regard to claim 6, '801 as combined with '905 further discloses the groove ('905: 20) having a trapezoidal cross-section ('905: Fig. 6).

19. With regard to claim 8, '801 further discloses the heat protection body (40) being manufactured from a ceramic material (Col. 3, lines 38-41).

20. With regard to claim 9, '801 further discloses at least one peripheral side (43) having a step (44) running essentially parallel to the front side (41) (Fig. 5).

21. With regard to claim 10, '801 further discloses the rear side (42) being shaped to the outer contour of the furnace wall (Col. 4, lines 54-56).

22. With regard to claim 12, '801 further discloses a boiler tube wall (26) having at least one retaining element (60) projecting therefrom (Fig. 8), wherein the retaining element (60) has a free end (Fig. 8: 62 and a portion of 61) corresponding to the cross-section of the groove (46), and the retaining element (60) is fit within the groove (46) of the heat protection body (40) (Fig. 8).

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Laux whose telephone number is (571) 270-7619. The examiner can normally be reached on M-F 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Rinehart can be reached on (571) 272-4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. J. L./
Examiner, Art Unit 3743

June 16, 2009

/Kenneth B Rinehart/
Supervisory Patent Examiner, Art Unit 3743